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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/625,526	07/26/2000	Joseph Earl Ford	Ford 46-6	7844

7590 11/21/2003
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EXAMINER

LEE, JOHN D

ART UNIT	PAPER NUMBER
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2874

DATE MAILED: 11/21/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/625,526	FORD ET AL.	
	Examiner	Art Unit	
	John D. Lee	2874	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 September 2003.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 10-13 is/are allowed.
- 6) ☒ Claim(s) 1, 7 and 9 is/are rejected.
- 7) ☒ Claim(s) 2-6 and 8 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 September 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
* See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- | | |
|-----------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>0903</u> . | 6) <input type="checkbox"/> Other: _____ |

Applicant's communication submitted on September 18, 2003, has been carefully studied by the Examiner. The arguments advanced therein, considered together with the amendments made to the claims, are persuasive with respect to the Dragone et al reference and the rejections based thereupon which were set forth in the previous Office action are hereby withdrawn. As explained further below, however, the arguments advanced with respect to the Bouevitch et al reference are not persuasive and the rejection based thereupon which was set forth in the previous Office action is maintained.

The new formal drawings submitted on September 18, 2003, are acceptable.

The following is a quotation of the appropriate paragraphs of 35 U.S.C. § 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claims 1, 7, and 9 are rejected under 35 U.S.C. § 102(c) as being anticipated by U.S. Patent 6,498,872 to Bouevitch et al. Refer to the appropriate drawings or parts of the specification. Regarding claim 1, Boevitch et al discloses an optical router (Fig. 11) in an optical communication system for routing multiplexed signals having a plurality of wavelengths that create a spectrum through the communication system by spatially shifting the wavelengths, said optical router including an output element comprising: a linear element (20) for receiving the signals having the plurality of wavelengths and for dispersing the spectrum into discrete regions onto an intermediate image plane (25); discontinuous optical element (50) in optical communication with the intermediate image plane for laterally shifting the discrete regions by predetermined lengths to produce a

laterally shifted spectrum (λ_i), each of said predetermined lengths being associated with one of the discrete regions; and a re-imaging optical element (10 and 90) for receiving the laterally shifted spectrum and for removing the dispersion created by the linear element and for re-imaging the spectrum onto the output element, wherein the re-imaging element is a concave mirror and the discontinuous optical element is a MEMS array.

Claims 10-13 are allowed. Although the Boevitch et al structure reads upon the claims as indicated above, Boevitch et al does not disclose or suggest the specific *method for routing optical signals* set forth in claims 10-13.

Claims 2-6 and 8 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims. Boevitch et al does not disclose or suggest the linear element being a micro-optic array or an electromechanically actuatable MEMS tilt mirror. Boevitch et al also does not disclose or suggest the discontinuous optical element being a grating. Boevitch et al further does not disclose or suggest the re-imaging optical element being a lens/grating combination as specified in applicant's claim 8.

Applicant's arguments filed on September 18, 2003, with respect to the Boevitch et al reference, have been fully considered but they are not deemed to be persuasive. Applicant argues that Boevitch et al fails to teach or suggest the two-dimensional shift expressly recited in the rejected claims (i.e. a first "dispersing" of the input signal by the linear element and a second "lateral shift" of the signals to different locations). The Examiner respectfully disagrees. There is no question about the reference showing signal dispersion by the linear element (20); the disagreement lies in the showing of subsequent lateral shifting of the signals. As clearly seen in Fig. 11 of Boevitch et al, the spectrum

reflected from discontinuous optical element (50) follows different vectors than the spectrum received by element (50) prior to reflection. This clearly constitutes a "lateral shift" as set forth in the claims. The argument is thus not persuasive. With respect to the previously applied Dragone et al reference, the Examiner agrees that the reference is not applicable as prior art against the claims. Applicant has provided evidence that the present application and Dragone et al were commonly owned at the time that the presently claimed invention was made.

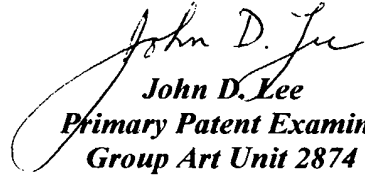
The document cited by applicant in the Information Disclosure Statement filed on September 18, 2003, has been considered and made of record (note the attached initialed copy of form PTO-1449).

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR § 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and an advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR § 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the mailing date of this final action.

Any inquiry concerning the merits of this communication should be directed to Examiner John D. Lee at telephone number (703) 308-4886. The Examiner's normal work schedule is Tuesday through Friday, 6:30 AM to 5:00 PM. Any inquiry of a

general or clerical nature (i.e. a request for a missing form or paper, etc.) should be directed to the Technology Center 2800 receptionist at telephone number (703) 308-0956, to the technical support staff supervisor (Team 2) at telephone number (703) 308-3072, or to the Technology Center 2800 Customer Service Office at telephone number (703) 306-3329.


John D. Lee
Primary Patent Examiner
Group Art Unit 2874